

Emerald Ash Borer: The Opportunity of a Lifetime

by Dick Rideout, State Urban Forestry Coordinator DNR Division of Forestry

s I'm writing this, emerald ash borer has yet to be found in Wisconsin. State crews are poised to begin their sampling and bark peeling of stressed ash in high-risk areas. With luck they won't find any infested trees. But despite our best efforts I know in my heart our luck won't hold. At some point we will be faced with this devastating insect.

In 2003, I visited Detroit—the epicenter of the EAB invasion—and witnessed firsthand the destruction brought to ash trees, large and small alike. I'm old enough to remember that this is how it looked when Dutch elm disease came to town. It changed the face of the community from a verdant Eden to a wasteland. This is the vision tree people have of EAB—a depressing, inevitable scourge. However, I'd like to change your perspective.

Emerald ash borer is the opportunity of a lifetime for urban forestry and we must take advantage of it, now! If we don't, we are doomed to repeat the mistakes of DED and we'll be worse off than ever.

Awareness

Urban foresters constantly complain that no one cares about their program. EAB has changed all that. Across the state, newspapers, television, radio and the Internet are abuzz with stories when EAB hits nearby. You couldn't buy this kind of publicity! Capitalize on this foot-in-the-door and sell the value of your community's forest to your leaders and your residents.

Do you know the value of your urban forest? With an inventory you can tell policy makers how many ash you have and what it will cost to remove them and replant. New software can calculate the value of the environmental services provided by your ash trees. The numbers can be staggering and will get the attention of even the most recalcitrant council member. Recent work by the USDA Forest Service shows that the cost to replace the ash in Wisconsin communities would be about \$2.4 billion and this does not include the cost of removal or the lost environmental services provided by the trees or the degradation of the rest of

the urban forest while all resources are focused on ash removal. Don't have an inventory? This is the perfect opportunity to get support to have one done.

Management

The long-term solution to EAB and future invasives is urban forest management. One of the failures of the DED era is we set ourselves up to fail again. When trees come down fast, there is great pressure to replace them as quickly and cheaply as possible. The result? An urban forest with just a few species, all the same age—another recipe for disaster. A management plan, based on an inventory, can guide the process of creating a diverse, sustainable community forest capable of withstanding an assault with minimal economic, environmental and social impact. Now is the time to prepare such a plan.

Support

EAB will affect every ash tree in the community, public or private. When faced with such a personal threat, people respond. Now is the time to rally supporters. Form a tree board. Start an advocacy group. Enlist neighborhood groups to be your eyes and ears for tree problems. Contact your local media news directors and editors and feed them information on what EAB will do to your town.

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In recognition of 50 years as an industry leader and central figure in the development of principles, practices and the profession of urban forest management, Robert "Bob" Skiera became the first urban forester inducted into the Wisconsin Forestry Hall of Fame.



Volume 14 Number 4 Winter 2006–2007



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Community Profile

Tree City USA: 11 years Growth Award: 1999 Population: 7489 Number of Street Trees: 2100 Number of Parks: 10 Primary Industry: tourism

Program Profile

Staff: 1 full-time arborist/forester (shared with street department assignments)

1 to 2 part-time street department workers

Street department staff

as needed 2005 Department Budget: contracted tree planting: \$10,000 operating budget: \$34,700

Community Profile:

City of Lake Geneva

by Daniel S. Winkler, P.E. Director of Public Works & Utilities

The City of Lake Geneva, often called the Newport of the West, has long been known as "home away from home" for many of Chicago's famous families: the Wrigleys, the Mortons, the Maytags and the Fields, to name but a few. What is lesser known, but just as important, is Lake Geneva's other nickname, Maple City, for the indigenous tree that dominates almost seventy percent of the city's tree population.

Since its founding in 1837, the city's primary industry has been tourism, with the bulk of activity centered on Geneva Lake, a pristine, 5200-acre spring-fed body of water that draws people to its shores year-round. Most visitors are honeymooners, families or busy couples looking for a short vacation within an easy one- to two-hour drive from the bustle of Chicago and Milwaukee, with their combined population base of nearly 8 million. During busy summer weekends the "regular" population of Lake Geneva swells from 7400 to 30,000-plus.

Visitors fish, golf, ski or climb aboard one of the many sightseeing cruises run by Gage Marine, including the famous mail boat where courageous teens amaze crowds with their athleticism, jumping from boat to pier and back again to deliver the mail. Couples peek inside the historical Riviera Ballroom, buy gimcracks, kitschy souvenirs and delicious cream puffs in the quaint shops below. They take horse-drawn carriage rides, long strolls along the well-manicured parkways and shop until they drop in the nearby retail district



City arborist Jon Foster (right) and Streets worker Rick Clapper (left) prune a young flowering crab along the lakefront.

where tree-lined streets, historically preserved buildings and brick sidewalks evoke a comfortable sense of small-town America.

Lake Geneva plays host to numerous events including Art in the Park, Venetian Festival, Maxwell Street Days, Octoberfest and Winterfest where the US National Snow Sculpting Championships take place. The chamber of commerce and business improvement district work tirelessly to make visitors feel welcome, despite the strain on day-to-day city services.

Our Forestry Program

A major component of the city's charm lies in its beautiful park system and well-maintained urban forest, though this was not always the case. Until the late 1980s, forestry maintenance consisted of little more than safety pruning and removal of dead or dying trees. Sometimes the city planted replacements and sometimes they did not.

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Articles, news items, photos and ideas are welcome.

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This newsletter is available in alternative format upon request and can also be downloaded in PDF format from our Web site: http://dnr.wi.gov/org/land/forestry/UF/

For breaking UF news, anecdotes, announcements and networking opportunities, sign up for The Urban Forestry Insider, DNR's twice-monthly e-newsletter. Archives are at http://dnr.wi.gov/org/land/forestry/UF/resources/InsiderArchive.html

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Mulch Ado about EAB

February 4-6, 2007



Annual Conference & Trade Show

Annual Urban Forestry Conference Regency Suites & KI Convention Center, Green Bay, Wisconsin

If you are involved with managing community trees or caring for trees, you can't afford to miss this conference! The conference will provide you with the necessary tools and most current information to help you prepare for emerald ash borer, understand the newly revised tree care safety standards (ANSI Z133.1), understand best tree management practices and much, much more.

Sunday afternoon workshops

- newly introduced community readiness EAB toolkit
- integrated pest management practices

Conference sessions

- revisions in the tree care safety standards
- inventories for EAB
- problems of deep planting
- storm damage research
- construction & tree health
- and much, much more!

Trade Show Networking with Wisconsin tree care professionals

For complete program information and on-line registration go to www.waa-isa.org

Early-bird registration discount available until January 19, 2007

Walk-in registrations welcomed!!

EAB-Opportunity of a Lifetime

Continued from page 1

And don't just look for outside support. Your mayor and council don't want to be remembered as the ones who let EAB destroy the community. Show them how they can grow a living legacy instead.

EAB will have a significant effect on your public works department. Though engineers might think losing street trees would be a blessing, the reality is that storm water peak flows will increase dramatically, pavement degradation will accelerate, energy demand will jump and water demand will skyrocket. One Michigan community reported a 30 percent increase in water usage because once-shaded landscapes are now baking under the sun. Ironically, it's in your engineer's best interest to have a thriving urban forest.

Partnerships

EAB offers a host of opportunities for working with the green industry. Urban forestry and landscape professionals can provide inventories, GIS layers, management plans, staff training, tree health care, planting, maintenance and removal services. Work with nurseries to develop innovative ways to provide the broadest diversity of species imaginable. If EAB hits hard there will be a flood of wood to deal with. Largeand small-scale entrepreneurs can come up with creative solutions. Nonprofits, garden clubs, professional associations and our regional networking groups are also great sources for potential partnerships.

On the downside, disasters attract snake-oil salesmen, so it is important to consider consumer protection. Now is the time to promote use of ANSI standards, certified professionals, accredited companies and best management practices.

How?

One way or the other, EAB is going to cost us. It is incumbent on all of us to use our new awareness, support and partnerships to demand funding at all levels for research, readiness, monitoring and management to combat EAB and minimize its cost. The DNR and its partners are developing a community toolkit filled with materials to help you prepare for EAB. Come to our annual conference February 4–6 to get a copy and learn how to use it.

Emerald ash borer has given us a rare opportunity to show the world the value of urban forests and the need to properly manage them. Seize this opportunity. You won't get a second chance.

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Lake Geneva



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Lake Geneva eventually recognized the importance of a well-planned, well-maintained and well-protected urban forest. In 1995, Lake Geneva applied for and earned its first Tree City USA certification. The process elevated public awareness, established a tree board, inventoried our tree population and created an ordinance to protect and manage what already existed. Recognizing the abundance of maple trees, part of the management strategy avoided the planting of replacement maples for the first ten years of our program, choosing instead to diversify the tree population with other approved species.

In the years since, the city has fine-tuned its urban forestry management plan and earned both the Ten-Year and the Growth Awards from the National Arbor Day Foundation. We also received the prestigious Gold Leaf Award from the International Society of Arboriculture. One of the more pleasing and satisfying outcomes of the urban forestry program has been citizens and lawmakers recognize trees as an important factor to the quality of life component in Lake Geneva. Their care and upkeep remain a priority for the city.

A few of the activities or programs undertaken over the past 10 years include:

- establishing a tree inventory as part of the city's GIS Arcview program
- replacing dying maples in the downtown area tree wells with hardy ginkgo and locust varieties
- establishing a tree nursery with bare-root stock
- public education:
 - pruning and planting demonstrations for elementary students
 - grant funding through the power company to educate the public on low-grow trees or planting the right tree in the right location
 - granite markers along the city's asphalt recreational trail detailing attributes of newly planted trees
 - designation with an orange "X" on the trunk to inform the public of pending tree removal
- a buy-a-tree cost share program where the property owner contributes toward the cost of a parkway tree in areas without existing trees
- installing and maintaining mulch rings around park trees as protection against weed whip and mower damage

With an inventory of over 2000 public trees, the city is fortunate to have a certified arborist and a well-trained, experienced crew in charge of the pruning, disease management and safe removal of trees. We grind out tree stumps, but contract out tree planting in accordance with DNR specifications. The city also allocates as much as \$7 to \$8 per capita toward its forestry activities. We are proud to say that we have planted at least as many trees as have been removed in any given year, averaging 50 to 60 trees per year or 600 trees total since becoming a Tree City back in 1995. In addition, our staff does clearance- and safety-pruning for 200 to 300 trees annually. We also boast the largest ginkgo and baldcypress trees in the state of Wisconsin.

The city has also faced the same threats to its urban forest as other Wisconsin communities, including oak wilt, maple decline, Dutch elm disease, gypsy moth and now the emerald ash borer. These problems continue to threaten both the private and public forests, and our staff is constantly vigilant for early signs of problems. With the exception of the ubiquitous maple trees, diversity has kept most of these problems to a minimum.

Goals

The city has established several goals:

- employing a certified arborist as city forester
- yearly tree maintenance and safety training for employees
- immediate safety steps with trees posing imminent danger to the public
- pruning within 48 hours any trees posing a traffic hazard
- winter removal of trees rated more than 50 percent dead
- removing all stumps prior to replacement planting
- planting replacement trees within a year from among choices on the city's approved diversified stock planting list
- conducting a comprehensive tree inventory every five years

Like other municipalities in the state of Wisconsin, ever-increasing budget restrictions imposed by expenditure restraint have made it increasingly difficult for Lake Geneva to update its comprehensive inventory every five years and to plant replacement trees one-for-one.

Project Profile:

Students and City Team Up for Trees

by Don Kissinger, Urban Forestry Coordinator DNR West Central Region

The City of Rhinelander, population 8000, currently has no formal community forestry program. But thanks to a 2004 Technology in Urban Forestry Workshop at University of Wisconsin–Stevens Point attended by Parks Director Gunder Paulsen, the city is beginning to learn about its street tree population while engaging young citizens in purposeful information gathering.

Through the workshop and further assistance from Jill Johnson of the USDA Forest Service, Midwest Center for Urban Forestry, a number of Personal Digital Assistants (PDAs) were loaned to junior- and seniorhigh students at Northwoods Community Secondary School in Rhinelander to begin a street tree inventory. Representatives from Wisconsin DNR, UW-Stevens Point and the Forest Service worked with the students on a couple of occasions to supplement and sharpen their tree identification skills. Students also developed the equally or more important skill of determining which trees needed a second review by a forestry professional for corrective or removal action. Environmental education teacher Kirby Kohler stated, "This project worked particularly well using the more open charter-school concept, in that we had the latitude to spend larger and more meaningful chunks of time working on the project, in comparison to a typical school class period of only an hour or less during the school day."

Along with identifying tree species, the students recorded tree conflicts with power lines or street signs, street corner view obstructions and open spaces for terrace or boulevard planting. When assessing open spaces the kids also determined what size tree would best fit the terrace width and considered distance from nearby structures, driveways or other public or private trees. The neatest part of the project was the discussions that arose from working with the PDAs and the various inventory attributes. The kids came to realize how adjacent trees affect each other's growth and vigor, the significance of good tree structure and branch unions, and more importantly what could result from uncorrected weak or narrow branch unions with included bark. The students began to understand how trees callus over wounds and how improper pruning can lead to future structural or health problems. Much time was also spent discussing tree condition and defining the attributes of a good tree versus a fair tree or a poor tree versus very poor.

The students' inventory took place in sections of the city earmarked for pruning in the near future by Wisconsin Public Service Corporation contract crews. The inventory information was given to Parks Director Paulsen who discussed the data and confirmed pruning and removal needs with planning specialists from Asplundh Tree Expert Company.

The project enabled students to fulfill some of their science curriculum requirements dealing with identification of Wisconsin plants and their habitats, envi-

ronmental problems and issues, plant physiology and the land ethic. Several students also completed a required science based writing exercise by using the urban forestry project as their writing theme.

This past spring the students, their teacher and representatives from DNR and WPS held the city's second Arbor Day celebration. They planted a plum tree from the city's tree nursery, filling a vacant space they inventoried the prior year. At this occasion Dan Sievert, Forestry Line

Students from Northwoods Community Secondary School with (back row): Jeremy Riolo, Rhinelander Parks Dept., Gunder Paulsen, Rhinelander Parks Director, Dan Sievert, WPS Line Clearance Coordinator and Kirby Kohler, Environmental Education Teacher.

Clearance Coordinator from WPS, took the opportunity to thank the students for their inventory work and relayed how it provided the means for more efficient management of the city's boulevard trees. Dan also stressed the importance of contacting Diggers Hotline before digging and only planting proper low-growing trees where overhead wires are present.

Paulsen emphasized that having this new information for a portion of the city's street trees has led him to be more pro-active in obtaining varied trees for the small nursery at Pioneer Park, realizing that the city has areas of monoculture to address through future plantings. To this point the students have evaluated 216 trees and 166 vacant sites—oops, that should be 165 open sites now! This project appears to be one that will continue as it has been a win—win—win for all involved. For more information contact Kirby Kohler at 715-365-9660 ext.5.

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Community Tree Profile:

White Spruce (Picea glauca)

by Laura G. Jull Dept. of Horticulture University of Wisconsin-Madison



White spruce



White spruce foliage and cones

Native To: Northeastern and Midwestern US, Canada over to Alaska

Mature Height: 40-70'

Spread: 20–30'

Form: Pyramidal, broad form; dense when young becoming open with age; narrow, spire-like top; horizontal branches with pendulous branchlets.

Growth Rate: Moderate

Foliage: Evergreen leaves are needlelike, borne singly, 4-sided; odor when

> crushed; dense and spirally arranged around the stem; pointed, ½ to 3/4" long, softer to the touch than most other spruce, and curved forward. Upper surface of needles is pale green to gray-green, glaucous, with stomatal bands. Needles are attached to the stem by a sterigma (little woody peg).

Buds and Stems: Globose to rounded, chestnut brown, 1/4"-long buds; non-resinous, with papery, keeled bud scales. Stems are vel-

lowish brown to greenish gray tinged with orange or purple, shiny and glabrous.

Fall Color: None; evergreen

Cones: Monoecious (separate male and female strobili borne on one tree), $1\frac{1}{4}$ to $2\frac{1}{2}$ " long, $\frac{1}{2}$ to $\frac{3}{4}$ " wide; narrow, pendulous on the branches, with thin, papery, flaky, flexible cone scales that are smooth edged. Immature cones are rosy purple, maturing to a light brown color. Cones are persistent on the tree, eventually falling to the ground intact. Not a litter problem. Usually two seeds per cone scale.

Bark: Thin, flaky to scaly, ashy brown with salmoncolored inner bark. Freshly exposed bark scales are somewhat silvery.

Site Requirements: Prefers rich, loamy, moist, welldrained soils but white spruce is pH adaptable; heat, wind, drought and urban tolerant. Prefers full sun and is moderately tolerant to road salt. White spruce is also more tolerant to moister soils than most other spruce.

Hardiness Zone: 2b

Insect & Disease Problems: Spruce budworm, spider mites, European spruce sawfly, Cooley spruce gall adelgids, bagworms, borers, root rot, needle casts, Rhizosphaera needle blight, Cytospora canker, but is much less susceptible to pests than Colorado blue

Suggested Applications: White spruce and its relative, Black Hills spruce (*Picea glauca* var. *densata*), are suited for residential landscapes, unlike Norway spruce (Picea abies) which gets very wide with age. Unlike the overused, pest-prone Colorado blue spruce (Picea pungens f. glauca), white and Black Hills spruce are less pest prone and longer lived in the landscape. White and Black Hills spruce can be a specimen tree that can also be used in masses, as a screen or as a park tree. Since white and Black Hills spruce are tolerant to wind, some salt, and urban conditions, they can be used as a windbreak or planted along highways.

Limitations: Does not make a good Christmas tree as needles are somewhat sharp and fall quickly when brought indoors. Tends to be overused in landscaping and as a result, pressure from insects and diseases may increase.

Comments: White spruce is a beautiful, low-maintenance, native evergreen tree for landscaping in residential and commercial landscapes. It is an excellent substitute to the overused, pest-prone Colorado blue spruce. The Native Americans used the roots of white spruce to lace their canoes and baskets. Songbirds and mammals rely on the seeds for food.

Common Cultivars or Selections:

'Albertiana Conica': dwarf Alberta spruce; very short, prickly, light green needles; dwarf conifer, 8–12' tall, very slow growing; tight, pyramidal form, compact; prone to winterburn and spider mites; popular

'Blue Wonder': blue foliage; dwarf conifer

'Cecilia': blue foliage, globular, dense, dwarf conifer, 1 to 2' tall

'Coerulea': silver-blue, shorter foliage; intermediate in height, 6' tall; open habit; showy new growth in spring

var. densata: Black Hills spruce; cold hardy to zone 3b; dense, pyramidal form, 20 to 40' tall; more compact with a blue-green to dark green color when compared to white spruce; slower growing; native to Black Hills area of western South Dakota into Wyoming; very popular

'Echiniformis': short needles; rounded shrub with brittle branches; dwarf conifer, 1' tall

'Elf': less than 1' tall; witch's broom of 'Albertiana Conica'; very slow growing; dense globe with short, thin needles: dwarf conifer

'Gnom': conical, slow growing; 1 to 2' tall, dwarf conifer

'Heartland Metz': very slow growing, dwarf conifer; grayish green leaves; short, stiff branches

'Hobbit': dwarf form of 'Albertiana Conica'; short, rounded form; globose when young becoming conical with age; dwarf conifer

'Humpty Dumpty': very dense, short, plump, wide at base, pyramidal form; smaller than 'Albertiana Conica', dwarf conifer

'Jean's Dilly': small size, 3 to 4' tall; shorter, thinner needles; blue-green foliage; shoots end with a twist; dwarf conifer

'Little Globe': compact, globular form; dwarf conifer; large buds; 2 to 3' tall

'North Star': more winterburn resistant; compact, dense form; pyramidal, 8 to 10' tall; faster growing; dwarf conifer

'Pendula': weeping white spruce; narrow, upright form with weeping branches that are closely appressed to the main trunk; 30' tall, graceful

'Pixie': short, dark green needles with a blue-green cast; extremely dense, very compact; larger buds; dwarf conifer

'Pixie Dust': has foliage like 'Rainbow's End' with form and texture of 'Pixie'; dwarf conifer

'Rainbow's End': in spring, the foliage is lighter green, the second flush later in the year is creamy yellow; 5 to 6' tall, pyramidal form; slow growing, dwarf conifer 'Sander's Blue': blue foliage in spots with green in other areas; narrow form; very nice dwarf conifer

'Sander's Fastigiate': very fastigiate, upright branches when young; green leaves; dwarf conifer

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Trees for Urban and Suburban Landscapes, 1997, by Edward F. Gilman, Delmar Publishers, Albany, NY.

Trees of the Northern United States and Canada, 1995, by John L. Farrar, Iowa State Univ. Press, Ames, IA.♥

What Damaged This Tree?

Do you have pictures of tree damage others ought to know about? Send them to Kim Sebastian (address on page 16) and we'll print them here!



Turn to page 11 to find out. . .

Wisconsin Champion Tree Forum

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by Ian Brown, Urban Forestry Assessment Specialist DNR Division of Forestry

A new on-line forum has been created by an ambitious group of Champion Tree inspectors! The forum is designed to be a communication portal for Champion Tree inspectors and anyone interested in the program. It can be found at www.arboristsite.com/forumdis-play.php?f=67.



Sunburst thornless honeylocust at Longnecker Gardens, UW–Madison Arboretum

Photo by Ian Brown, WDNR

The Department of Natural Resources would like to thank Darin Johnson of ArboristSite.com for providing the server space and John Sanborn, sanbornstrees@yahoo.com, for moderating the new forum. While it is hosted on an external site, the forum is dedicated to improving the capabilities of the Wisconsin Champion Tree Program.

The DNR will work in conjunction with the forum moderators to post pertinent new tree nominations and update assistance requests. The actual nomination forms should still be sent to Ian Brown, DNR, PO Box 7921, Madison, WI 53707 or Ian.Brown@dnr.state.wi.us. DNR will continue to maintain the Wisconsin Champion Tree database.

The new forum should be considered a supplemental communication and information opportunity. For information on the Wisconsin Champion Tree Program visit the DNR Web site at www.dnr.state.wi.us/org/land/forestry/UF/champion/. Enjoy the new resource and keep a lookout for those big trees!

For those of you interested in becoming a Champion Tree inspector, there are three required proficiencies (tree identification, tree measurement and GPS). Inspectors assist the program coordinator by verifying new tree nominations and updates within a designated county coverage area. If interested, please contact Ian Brown at Ian.brown@dnr.state.wi.us or 608-264-8852 for more information. Enjoy the new resource and keep a lookout for those big trees!

Coming Events



February 4–6, 2007 — DNR/WAA Annual Urban Forestry Conference and Trade Show, Regency Suites & KI Convention Center, Green Bay, WI. Contact Josh DePouw, 920-562-0282 or jdepouw@new.rr.com.

February 18–23, 2007 — *Second Municipal* **Forester Institute**, UCLA Conference Center, Lake Arrowhead, California. Contact SMA at www.urbanforestry.com.

February 20–23, 2007 — 2007 American Society of Consulting Arborists Consulting Academy, Hyatt Regency Hotel, Sacramento, CA. Contact ASCA, 301-947-0483, asca@mgmtsol.com or www.asca-consultants.org/conferences.html.

February 21, 2007 — Wisconsin Urban Forestry Council quarterly meeting, Madison, WI. Contact Laura Wyatt, 608-267-0568 or laura.wyatt@wi.gov.

March 7–8, 2007 — *International Symposium on Trees and Lightning*, Fort Lauderdale, FL. Contact Florida Chapter ISA at FloridaISA@aol.com.

March 20, 2007 — *Hazard Trees Workshop*, Milwaukee County Zoo, Milwaukee, WI. Contact National Arbor Day Foundation, 402-474-5655, <u>conferences@arborday.org</u> or <u>www.arborday.org/programs/conferences/communityforestry/</u>.

March 21, 2007 — Trees, People and the Law Seminar, Milwaukee County Zoo, Milwaukee, WI. Contact National Arbor Day Foundation, 402-474-5655, conferences@arborday.org or www.arborday.org/programs/conferences/communityforestry/.

April 3–4, 2007 — *Minnesota Shade Tree Short Course*, Earle Brown Heritage Center, Brooklyn Center, MN. Contact Oona Besse, 612-624-3492 or conferences3@cce.umn.edu.

April 9–12, 2007 — Emerging Issues Along Urban/ Rural Interfaces II, Atlanta, GA. Contact Dr. David Laband, 334-844-1074, labandn@auburn.edu or www.sfws.auburn.edu/urbanruralinterfaces/.

Urban Forest Insect Pests:

Ash Bark Beetle

by Linda Williams, Forest Health Specialist DNR Northeast Region

There are three species of ash bark beetle found in Wisconsin: eastern ash bark beetle (*Hylesinus aculeatus*), northern ash bark beetle (*Hylesinus criddlei*) and the white-banded ash bark beetle (*Hylesinus fasciatus*). Adult beetles are about two to three millimeters long, are dark colored and shaped somewhat like a stout but tiny kidney bean. Immature beetles are a tiny, white, legless grub, slightly curved, with a tan head capsule.

Ash bark beetles attack all ash (*Fraxinus* sp). The adults spend the winter in short tunnels that they chew into the bark. In the spring when the adults are ready to mate, they fly to susceptible trees and bore through the bark until they reach the cambium layer just under



Adult eastern ash bark beetles

the bark. Here they mate and excavate a brood gallery. Eggs are laid along the edges of the gallery. When the eggs hatch, larvae bore outwards from the brood gallery in a radiating pattern. When the larvae have completed their development they pupate under the bark. As adults emerge they chew small shot holes, about one millimeter in diameter, out of the bark as they exit the tree. Adults attack recently dead, dying or severely stressed trees and are not usually considered a pest because the trees are already dying from some other cause. Control is not usually necessary but when desired, trees and logs can be de-barked, which will kill any larvae under the bark.





Larval galleries radiating outward from horizontal brood galleries.

April 16–18, 2007 — Trees & Utilities National Conference, Tuscany Suites & Casino, Las Vegas, NV. Contact National Arbor Day Foundation, 402-474-5655, conferences@arborday.org or www.arborday.org org/programs/conferences/communityforestry/.

April 30–May 3, 2007 — *i-Tree Train-the-Trainer Academy*, Blacksburg, VA. Contact www.arborday.org/itree/.

May 21–22, 2007 — Storms Over the Urban Forest National Conference, Atlanta, GA. Contact National Arbor Day Foundation, 402-474-5655, conferences@arborday.org or www.arborday.org/shopping/conferences/conferencelist.cfm.

June 6, 2007 — Wisconsin Urban Forestry Council quarterly meeting, Madison, WI. Contact Laura Wyatt, 608-267-0568 or laura.wyatt@wi.gov.

June 18–20, 2007 — *Urban Wildlife Management National Conference*, World Forestry Center, Portland, OR. Contact National Arbor Day Foundation, 402-474-5655, conferences@arborday.org or www.arborday.org/programs/conferences/community-forestry/.

July 28-August 1, 2007 — International Society of Arboriculture Annual Conference & Trade Show, Honolulu, HI. Contact ISA at www.isa-arbor.com/conference/.

September 12, 2007 — Wisconsin Urban Forestry Council quarterly meeting, Madison, WI. Contact Laura Wyatt, 608-267-0568 or laura.wyatt@wi.gov.

September 15–19, 2007 — Society of Municipal Arborists Annual Conference, Hollywood Beach Marriott Resort & Spa, Hollywood, FL. Contact www.urban-forestry.com.

November 8–10, 2007 — *TCI Expo*, Connecticut Convention Center, Hartford, CT. Contact Tree Care Industry Association at www.natlarb.com/.

December 5, 2007 — *Wisconsin Urban Forestry Council quarterly meeting*, Madison, WI. Contact Laura Wyatt, 608-267-0568 or laura.wyatt@wi.gov.

If there is a meeting, conference, workshop or other event you would like listed here, please contact Dick Rideout at 608-267-0843 with the information.

Urban Tree Health Matters:

Photos by Brian

UW-Madison

Hudelson,

Plant Disease Diagnostics Clinic: 2006 in Summary

by Brian D. Hudelson UW-Madison Plant Disease Diagnostics Clinic

As the first true snow storm of the 2006/2007 winter approaches Madison, the time seems ripe to look back on the 2006 growing season to see what tree diseases were most prevalent among the samples that arrived at the Plant Disease Diagnostics Clinic. Such a retrospective can also provide insights on what diseases might be problematic in 2007.

If 2005 was best described by the words "water stress," then the word that best describes 2006 (at least in my mind) is "wet," or at least "wetter." While some areas in Wisconsin continued to see drought conditions, much of the state received adequate, if not excessive, rain. Because of this moisture, tree leaves

Anthracnose can lead to substantial leaf tissue death, leaf curling and even defoliation, particularly on hosts like white oak.



Tar spot on maple is a dramatic, if typically cosmetic, disease.

were wet for extended periods, and these "leaf wetness periods" provided an excellent environment for a variety of foliar pathogens to infect.

The most common of the foliar pathogens, and the most prevalent on samples at the PDDC in 2006, were the anthracnose fungi such as Gloeosporium and Colletotrichum. Gloeosporium in particular is a common pathogen on our most popular street trees such as maple and ash, and also can make oak trees (particularly white oak) look a bit ragged. The most typical symptom of anthracnose is the formation of blotchy necrotic (dead) areas on infected leaves, and with the wet weather that was prevalent this past summer, leaf necrosis in 2006 was often quite severe. In many cases of anthracnose on white oak, infections appeared to have occurred relatively early, before leaves had fully expanded. Thus, resulting tissue necrosis led to leaf growth distortions such as cupping and curling. In some instances on white oak, the disease was severe enough to lead to at least some defoliation. While anthracnose often—at least to homeowners—looks quite deadly, on tree hosts such as maple, ash and oak, anthracnose is primarily a cosmetic problem. These hosts seem to be fairly well adapted to having at least some anthracnose every year. Even oaks that defoliate due to anthracnose typically releaf by mid-summer and one would never know that anthracnose was a problem earlier in the year. The best management practice for anthracnose is good fall cleanup. Infested leaf litter should be collected and burned (if allowed), buried or hot composted.

The other foliar disease that I found of particular interest in 2006 was tar spot of maple. When I think of this disease, I tend to think of counties in eastern Wisconsin, particularly those bordering Lake Michigan, as I most often see and receive samples of tar spot from this area of the state. Tar spot was a bit of a media darling in 2006, receiving coverage in the local press in Waukesha County because of it prevalence in the Chenequa area. On a personal note, I was amazed at how much tar spot I found on maple leaf litter when I visited friends in Door County over the Thanksgiving holiday.

Tar spot is definitely a very dramatic disease. In its most common form caused by Rhytisma americanum, large, raised, tarry black spots that are roughly 3/4 inch or greater in diameter form on leaves. If one carefully exams these spots, one can often see a pattern that looks as though someone has left an impression of their fingerprint. In another variation of the disease caused by *Rhytisma punctatum* (and called speckled tar spot), individual spots are much smaller (approxi-



Verticillium wilt (shown here on maple) typically leads to a progressive sectional dieback of a tree canopy and eventual tree death.

mately 1/16 to 1/8 inch in diameter), and many of these small spots are clustered to form a larger, diffuse tarry area. Like anthracnose on maple, tar spot is a cosmetic disease and is best controlled by proper fall cleanup. Infested leaf litter can be burned, buried or hot composted.

The final disease that comes to mind after the 2006 growing season is Verticillium wilt. This disease affects a wide range of woody ornamentals including maple, ash, redbud, magnolia, tulip-tree, smokebush and many others. As I drove around the streets of Madison this past summer, I noted many terrace maples with flagging branches. At least some of this flagging may have been due to localized branch infections and girdling due to canker fungi. However, based on results from maple samples that were submitted to the PDDC, a fair amount of maple flagging appears to have been a result of vascular infections and vascular clogging due to Verticillium dahliae, the species of Verticillium that most commonly causes Verticillium wilt on woody ornamentals. One of the more memorable Verticillium wilt samples that arrived at the PDDC was submitted by one of my colleagues. The disease was first apparent as a single flagged branch on the tree, but rapidly progressed and flagging spread throughout most of the tree over the course of the summer. My colleague eventually opted to remove her maple. In addition to seeing Verticillium wilt on classic hosts such as maple and ash, PDDC staff also documented Verticillium wilt on new hosts such as snowberry. Wet weather this past summer most likely has provided excellent conditions for Verticillium infections on a variety of woody and herbaceous ornamentals and I expect to see an increase in Verticillium wilt on samples submitted to the PDDC in 2007.

As always, making predictions about diseases in an upcoming growing season can be a dicey prospect. I have often made predictions, only to eat my words as the new season progresses. Only time will tell if anthracnose, tar spot and Verticillium wilt truly will be severe problems in 2007.

What Damaged This Tree?



Stem girdling injury is common when tree stabilizing materials are not removed. Here is another reason to remove ties and stakes following tree establishment! No one ever returned to remove the metal fence posts used to stake this tree when it was planted approximately 20 years ago. One of the stakes became an obstacle, initially interrupting vascular flow and now fostering decay.

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Photo by Ian Brown, WDNR

Ken Ottman, Council Chair

Council News:

Recognizing a Wisconsin Urban Forestry Legend

by Ken Ottman, Chair Wisconsin Urban Forestry Council

On October 19th I was asked to emcee the luncheon ceremonies at the Wisconsin Arborist Association fall seminar. It was here that Chief State Forester Paul DeLong posthumously inducted Bob Skiera into the Wisconsin Forestry Hall of Fame. A walnut plaque, which will hang in the Hall located within the College of Natural Resources building on the UW—Stevens Point campus, was unveiled. A replica was presented to Pat Skiera and her family. Bob and Pat Skiera have long been Wisconsin's "First Family of Arboriculture." As I had known Bob for over 30 years as a co-worker, mentor and most importantly friend, participating in this ceremony was indeed a great honor.



Chief State Forester Paul DeLong presents Wisconsin Forestry Hall of Fame plaque to Pat Skiera.

Bob's influence on arboriculture was far reaching. He was instrumental in forging the partnership that made WAA a chapter of the ISA. He also facilitated the formation of the Student Society of Arboriculture. He served on countless national and international committees, lending his expertise to push the urban forestry movement forward.

What made the biggest impression on me was how Bob shared of himself. He always took time to talk and listen to anyone who was so inclined. He sought ideas and shared experiences with fellow practitioners. He especially focused his attention on students by making himself available and approachable. At meetings, he would often be seen gathered with students around the beer keg (he was, after all, from Milwaukee). He listened intently to them, answered their questions, shared his experiences and encouraged them in their pursuits. A fellow arborist described Bob. "He was always upbeat. He made you feel good about yourself." Another said, "It was Bob that put the fire in my belly." Still another said "Today, because of Bob's strong positive influence, there are a myriad of urban forestry professionals who are striving to carry forth his strong ideals."

Occasionally we are privileged to know someone who is truly remarkable. Many of us benefited from Bob's advice and counsel. His dynamic influence on our industry was and continues to be immeasurable. He touched the professional lives of us all. Induction into the Forestry Hall of Fame is our way of saying... thanks, Bob, for all you did.

The following tribute shares a brief glimpse into the life of Bob Skiera and the urban forestry legacy he created.

The Wisconsin urban forestry community celebrates the induction of former Milwaukee city forester Robert Skiera into the Wisconsin Forestry Hall of Fame. Skiera, one of the most prominent municipal tree managers of the 20th century, was nominated for the Hall of Fame by the Department of Natural Resources based on his accomplishments during a 50-year career in urban forestry.

Starting as an arborist-trainee following military service in 1955, Skiera was appointed Milwaukee city forester in 1973, a position he held until 1990 when he entered private practice as an urban forestry consultant. During his employment with the City of

Milwaukee, he guided the city through Dutch elm disease, one of the nation's worst urban forestry disasters. Skiera not only directed the removal of more than 250,000 infected trees but most importantly convinced city policy makers to fund reforestation and ongoing maintenance for a new community forest. Under his leadership, Milwaukee acquired one the first computerized tree inventory programs and one of the first tree management programs, both of which are now commonplace. Milwaukee was awarded one of the first Tree City USA designations in 1979, which the city has maintained for 27 years. Skiera recognized, early on, the valuable services trees provide as part of a city's infrastructure and the need to develop

partnerships not only with citizens but with policy makers and public works departments. His efforts led to the incorporation of trees into construction and maintenance specifications which set the standards for municipal tree protection efforts.

Urban forestry education was one of Skiera's passions, not only for himself and his staff, but for those at every level. He served as an urban forestry advisor to the University of Wisconsin–Madison, the University of Wisconsin–Stevens Point and the Milwaukee Area Technical College where he was involved in initiating the program and served as an adjunct instructor. He played a major role in the development of Havenwoods, an environmental education center in Milwaukee and Wisconsin's first urban state forest. Bob was equally effective sharing his knowledge and passion for urban forestry with citizens and school children, and always had time for students aspiring to urban forestry careers.

Skiera was a major force in the profession of urban forestry. Most active in the Wisconsin Arborist As-

sociation, he served as president in 1979 and was awarded Distinguished Service in 1986 and Honorary Life Member in 1991. His national reputation for leadership advanced him to presidency of the International Society of Arboriculture in 1988. Skiera was also actively involved with American Forests, the nation's oldest conservation organization, serving on its board of directors and as vice president. Skiera served as a charter member of the Wisconsin Urban Forestry Council, advising four DNR secretaries on urban forestry policy, and was the first urban forester to serve on the Governor's Council on Forestry appointed by former governor Tommy G. Thompson.

Urban foresters throughout Wisconsin applaud the induction of Robert Skiera into the Wisconsin Forestry Hall of Fame and as the first urban forester to receive this distinguished recognition. The Wisconsin Forestry Hall of Fame was founded in 1984 by public and private forestry organizations to recognize significant contributions to the practice of forestry in Wisconsin. Visit the Wisconsin Forestry Hall of Fame Web site at http://wisconsinforestry.org/ to see past inductees.

Wisconsin's EAB Internet Portal Launched

Wisconsin residents have a new resource to find emerald ash borer information on the Web through the combined efforts of the Department of Natural Resources, the University of Wisconsin–Madison, and Department of Agriculture, Trade and

Consumer Protection. The Internet portal, http://emeraldashborer.wi.gov, is a gateway for people looking for information about EAB, especially from a Wisconsin perspective. Adrian Barta, EAB program coordinator with DATCP, states,

"The latest news regarding the ash tree survey, quarantines and other pertinent information will be posted on the new portal, and I urge everyone to check it out."

Research Notes:

Evaluation of the Fate of Ice Storm-Damaged Urban Maple (Acer) Trees

by Christopher J. Luley¹ and Jerry Bond²

Ice storms annually cause millions of dollars of damage to urban trees and infrastructure in the United States and Canada. However, there is limited information to guide judgments on whether to remove ice-damaged trees.

This study followed the response of three maple species that were damaged in the 1998 ice storm in northern New York State. Norway (*Acer platanoides*), silver (*A. saccharinum*), and sugar (*A. saccharum*) were placed in one of three diameter classes and canopy-loss categories and were re-evaluated six years after the initial damage.

Over the five-year study period, 26.8 percent of trees were removed, and there was no statistical difference among species, crown loss or diameter class for these removals. Analysis of a variety of tree health and crown parameters showed that tree species was the most important factor in response, while diam-

eter class and crown loss were less important. With respect to overall tree health, although recent studies have suggested that while Norway maple is rated as resistant to ice storm damage, silver maple is rated as susceptible and sugar maple is rated as intermediate in susceptibility to ice damage, this study suggested that sugar maple actually responded less favorably than either Norway or silver maple.

These results suggest that urban tree managers should consider tree species as an important factor in making removal decisions after an ice storm.

¹Urban Forestry LLC, Naples, NY, formerly serving as Community Forester with Monroe County Cooperative Extension, Rochester, NY

²Davey Resource Group, Geneva, NY

Reference: Arboriculture & Urban Forestry, Vol.32, No.5, September 2006.♥

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Does Your Tree Board Have an Action Plan?



by Tracy Salisbury, Urban Forestry Coordinator DNR Northeast Region

(This article is adapted from "Best of Nonprofit Nuts & Bolts" in the Free Articles section of Nuts & Bolts Publishing Inc.'s Web site www.nutsbolts.com.)

Is your tree board struggling to stay focused? Does it seem like you are not getting things done in a timely manner? Maybe you need to develop an *action plan*.

An action plan will help you reach goals, meet objectives and accomplish tasks during the upcoming year. Having a plan gives you a sense of purpose and improves your chances for success.

At a minimum, an effective action plan should include the following:

- a goal of what you want to accomplish for the upcoming year
- specific and measurable objectives to reach your goal
- detailed tasks which will move you toward meeting your objectives
- person responsible for each task
- deadline for completing each task

Here is an example:

Goal-Enhance City Park.

Objectives-Prune existing trees and plant new trees.

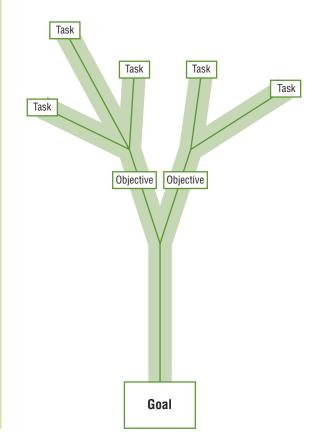
Pruning Tasks–Survey trees to determine pruning needs, obtain quotes, hire certified arborist to complete pruning.

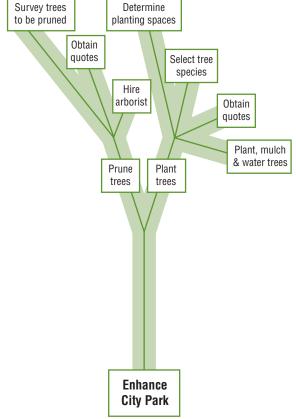
Planting Tasks—Determine open planting spaces, select trees for diversity, obtain quotes, plant, mulch and water trees.

Just a word of caution—Make sure that you keep goals realistic when developing an action plan. Often tree boards get fired up with enthusiasm, adopting a "we can accomplish anything" philosophy. Keep "in-themoment" enthusiasm in check with a dose of reality by making goals realistic and doable.

Once you have set your goals, identified your objectives and assigned the tasks, you need to create a calendar. This calendar should include board meeting dates, member names, addresses, and phone and e-mail addresses, and who is responsible for each task. You might also want to have quarterly updates of the action plan's progress. This will help the board correct any trouble spots along the way and provides a realistic look at what still needs to be completed.

Take the challenge, create an action plan. You will be amazed at what your tree board can accomplish!!





Urban Forestry Resources:

Urban Natural Resources Institute Webcasts

compiled by Cindy Casey, Urban Forestry Coordinator DNR West Central Region

The Urban Natural Resources Institute hosts online educational presentations known as Webcasts every third Wednesday of the month at 10:00AM Central Standard Time. For those unfamiliar with Webcast technology, it is the Internet equivalent of traditional radio or television broadcasting.

Participants can join a Webcast from the convenience of their own desk by logging in to the UNRI site for the visual component of the presentation, and by calling a toll-free number for the audio component.

The Webcasts are archived, so missed broadcasts can be downloaded and replayed on a personal computer at a later time using Windows Media Player software. A sampling of past broadcasts includes:

- urban growth: challenges and opportunities
- tree canopy and UV radiation
- storm preparedness and damage assessment
- tree response to injury
- the wildland-urban interface
- emerald ash borer research update

Details on how to join each Webcast (with user names and passwords) can be found at www.unri.org/web-cast/.





The Idea Exchange...

compiled by Olivia Witthun, Urban Forestry Assistant DNR Northeast Region

Tree for a Tree Program

Appleton, Wisconsin, has a unique idea for disposing of Christmas trees after the holidays. They call it the Tree for a Tree program. Residents can opt to bring their trees directly to the city's yard waste site instead of waiting for the city to pick them up curbside. For each tree brought in, residents receive a coupon for a free seedling redeemable that spring. In April, residents come back to pick up their free trees. The city's cost for the seedlings is relatively low, but the savings are immense due to the reduction of Christmas trees they have to collect. On average, 5500 seedlings are given out yearly. This equates to a savings of around \$10,000 for the city, depending on the year. Collected Christmas trees are chipped into mulch which is freely available to residents. Info: Todd Nett, Appleton Sanitation Foreman, 920-832-5580.

Living Roadways

An Iowa nonprofit group, Trees Forever, has partnered with Iowa State University Landscape Architecture and Iowa Department of Transportation to form Iowa's Living Roadways Program. The program helps small communities envision and design community-wide landscape improvements that enhance transportation corridors. To be eligible, communities must have a population under 10,000 and be able to provide \$1000 for project implementation. Landscape architects and student interns work with the community to design

projects that take into account community land use, historic features, recreational resources, environmental assets and the transportation system. *Info:* www.treesforever.org/content.asp?ID=2120.

Tree Banners for Charity

Artists, designers and photographers from around the world have created banners using the form, idea or a characteristic of a tree as their inspiration. The project, called Design Times Square: The Urban Forest Project, is displaying over 185 banners on street poles throughout New York's Times Square. Following their display, the tree banners will be recycled into tote bags and sold at auction. Proceeds will fund scholarships and mentoring programs. *Info:* www.urbanforestproject.org.

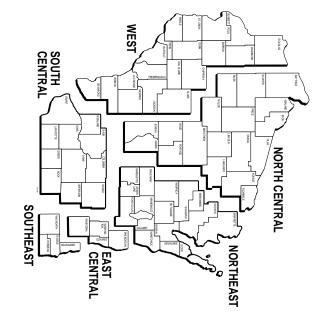
"Greenprint Denver" Increases Canopy Cover

In an effort to make Denver, Colorado, more sustainable the mayor announced a new sustainability agenda called Greenprint Denver. One of his goals is to triple the city's canopy cover from 6 percent to 18 percent by planting a million trees over the next 20 years. This is a great example of what can happen when research, public policy and advocacy come together to document tree loss and institute solutions. A 2001 satellite analysis conducted by American Forests focused the attention of public policy experts, government agencies and local advocacy organizations on the lack of trees in Denver. The Park People, a Denver nonprofit organization, helped bring this issue to the forefront and has already planted the first 100 trees for Greenprint Denver. *Info:* www.greenprintdenver.org.



Does your community or organization have an idea, project or information that may be beneficial to others? Please let your regional urban forestry coordinator know. We will print as many of these as we can. If you see ideas you like here, give the contact person a call. They may be able to help you in your urban forestry efforts.

Wisconsin DNR Urban and Community Forestry Contacts



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